South Carolina
Forestry Commission

# SCHOOL PROGRAMS

## HARBISON STATE FOREST

Bring your students to Harbison State Forest for a hands-on, engaging, and fun learning experience! All programs have been newly written and are aligned with South Carolina 2014 Science and 2015 SCCCR Math Standards. Programs include a pre-visit activity that prepare students to get the most out of their visit to the forest. Our programs teach students how to think, not what to think and follow the AKCA model for environmental education: Awareness, Knowledge, Challenge, & Action.

These FREE programs will be offered on Tuesdays-Thursdays with limited availability on Fridays. Programs can be modified to reach other specific learning objectives. Programs typically start at 9:30 and end by 12:45. Picnic tables are available for lunch but there are no on-site dining facilities. Please contact Beth Foley (bfoley@scfc.gov or 803-896-8855) at the Harbison State Forest Environmental Education Center for more details and to reserve your school's space.

### First grade

PROGRAM 1 – EARTH'S NATURAL RESOURCES

**Science standards:** 1.E.4A.1, 1.E.4B.1, 1.E.4B.2
**Math standards:** 1.MDA.1, 1.MDA.2

**Description:** Students will investigate the properties of Earth's natural resources and learn about ways that they can be conserved. Students will study the soils in a forest habitat to learn about their composition and structure. They will learn how trees benefit our environment and society and how we can help conserve natural resources through a fun paper-making activity. Students will study a forest environment and compare objects they observe by their length.

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# SCHOOL PROGRAMS

## FIRST & THIRD GRADE

### PROGRAM 2 – PLANTS AND THEIR ENVIRONMENTS

**Science standards:** 1.L.5A.1, 1.L.5A.2, 1.L.5B.2, 1.L.5B.3
**Math standards:** 1.MDA.4, 1.MDA.5

**Description:** Students will learn how plants survive and how they respond to changes in their environment. Working in a team, students will go on a seed scavenger hunt and then learn about different seed dispersal methods for different species and environments. They will act out the life cycle of a tree and create a tree using themselves as the parts. They will learn the positives and negatives of fire in a forest and how plants and animals are adapted to deal with fire. Students will observe, measure, record data, make graphs, and draw conclusions about what they have learned.

## Third grade

### PROGRAM 1 – FOREST ECOSYSTEMS

**Science standards:** 3.L.5A.1, 3.L.5A.2
**Math standards:** 3.MDA.3, 3.MDA.4

**Description:** Students will take an in-depth look at 3 different forest habitats to learn about their characteristics and how those environments support a variety of organisms including producers, consumers, and decomposers. At each site, students will record data on soil, sunlight, wind, temperature, topography, plant life, and animal life. Then students will organize, graph, and interpret their data to draw conclusions about the similarities and differences between the forest habitats.

### PROGRAM 2 – EFFECTS OF HABITAT CHANGES

**Science standards:** 3.L.5B.1, 3.L.5B.2
**Math standards:** 3.MDA.3, 3.MDA.4

**Description:** Students will examine how plants and animals respond when their habitats change. They will learn how changes are sometimes beneficial and sometimes harmful and that they can occur naturally or by the organisms that live in them. Students will become trees in a forest and learn how trees are affected by competition for resources and by natural or human-caused events. They will be collecting, organizing, and graphing data that will be analyzed to draw conclusions.

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# SCHOOL PROGRAMS

## FIFTH & SEVENTH GRADE

### Fifth grade

PROGRAM 1 – TERRESTRIAL AND AQUATIC ECOSYSTEMS

**Science standards:** 5.L.4A.1, 5.L.4A.2
**Math standards:** 5.MDA.1, 5.MDA.4

**Description:** Students will works in teams to collect, analyze, and interpret data from different terrestrial and aquatic forest environments. They will then summarize and communicate their conclusions about the living and non-living components of the different forest environments and how the different plants and animals are adapted to those environments. Students will get to use tools to collect information on temperature, diameter, wind speed, and soil characteristics.

PROGRAM 2 – ECOSYSTEM INTERACTIONS

**Science standards:** 5.L.4B.1, 5.L.4B.2, 5.L.4B.3, 5.L.4B.4
**Math standards:** 5.G.1, 5.G.2

**Description:** Students will learn about the flow of energy through the biotic components of ecosystems including producers, consumers, and decomposers. They will become a part of a food chain and food web in a forest environment to learn how energy flows through it. Students will experience first-hand how a deer population reacts to limiting factors by becoming part of a deer herd. By collecting and plotting data on a coordinate system and then looking for trends, students will see how limiting factors can affect an ecosystem.

### Seventh grade

PROGRAM 1 – FOREST ECOSYSTEMS: ORGANIZATION AND EFFECTS ON POPULATIONS

**Science standards:** 7.EC.5A.1, 7.EC.5A.3
**Math standards:** 7.GM.4

**Description:** Students will develop and use models to describe the characteristics of the levels of organization within forest ecosystems. They will collect data and make observations on how fire has played a role in developing each ecological level in two different forest ecosystems. Students will also learn how limiting factors can affect a forest by becoming trees in a hands-on game.

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# SCHOOL PROGRAMS

## SEVENTH GRADE & HIGH SCHOOL

PROGRAM 2 – POPULATION DYNAMICS AND ENERGY FLOW

**Science standards:** 7.EC.5B.1, 7.EC.5B.2, 7.EC.5B.3, 7.EC.5B.4

**Description:** Students will learn how the forests are dynamic and are ever-changing in response to natural and human-caused events. Students will act out food chains and food webs to show how energy flows through an ecosystem. Students will study the balance of ecosystems and how the introduction of new species may affect this balance.

### High school

Programs are tailored to the needs and learning objectives of the specific class and teacher. Typical classes that use Harbison State Forest for field laboratory exercises include Biology I, Environmental Studies, AP Environmental Science, and Agricultural Science classes studying forestry.

### Contact:

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